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ABSTRACT

This report discusses studies on the accuracy of parents' judgments of their children's cognitive abilities and preferences, and the relationship of the accuracy of parents' judgments to their child's level of development. Prior research showed that parents have some knowledge of their children's abilities, and that the more accurately parents judge their children's performance, the better the children perform. The studies reported in this paper covered alternative explanations for the conclusion that knowledge of one's child contributes to the quality of the parent-child relationship and the child's development. The first study aimed to clarify the nature and effects of parental accuracy. The study included children at two age levels, their fathers and mothers, and five different cognitive tasks to which the child responded. This design allowed the researchers to see whether parents' accuracy varied as a function of type of cognitive ability and whether parents were consistent in judging their children. The second study examined parents' knowledge of their children's preferences. Findings confirmed a relationship between parents' accuracy and their child's cognitive level. Concluding discussion explores four possible explanations for such a relationship. (RH)

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Parental Beliefs, Parental Accuracy, and Children's Development: A Search for Causal Relations

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A Search for Causal Relations

The work that I am going to discuss is concerned with two general questions under the heading of parents' beliefs. The first is how accurately parents can judge their children. The second is how parental accuracy relates to the level of the child's development.

The literature on parental accuracy is not a large one. Most examinations of the issue have focused on beliefs about cognitive abilities, with IQ performance the most popular dependent variable. The general conclusions from this research are easy to summarize: Parents have some but far from perfect knowledge of their children's abilities. It would be remarkable, of course, if this sort of in-between conclusion were <u>not</u> the case--that is, if parents were either perfectly accurate or totally inaccurate in judging their children. Thus far, however, we have little basis for deciding how impressive or unimpressive a particular level of parental accuracy is. And we know little about the factors that contribute to variations in accuracy.

The second issue concerns the relation between parental accuracy and child performance. Again, the general conclusion is easy to summarize: The relation is a positive one. On the average, the more accurately parents judge their children, the better the children perform. Perhaps the most striking demonstration of this phenomenon comes in a 1980 study by Hunt and Paraskevopoulos. In this study, preschool children responded to IQ items while their mothers simultaneously predicted how the

children would respond. Hunt and Paraskevopoulos reported a .8 correlation between number of accurate predictions by the mother and number of correct answers by the child. They explained this finding in terms of Hunt's "match hypothesis": Mothers who know their children best can match the demands of the environment to the child's cognitive level, thus promoting good cognitive development.

The notion that knowledge of one's child is a good thing--contributing to the quality of both the parent-child relationship and the child's development--is one that most people would like to believe, and one that certainly fits with most theories of socialization and of cognitive development. The problem, of course, is that there are alternative explanations for the kind of correlation reported by Hunt and Paraskevopoulos and by other researchers. (Indeed, with a correlation as large as .8 there would almost <u>have</u> to be alternative explanations.) Perhaps the most worrisome of these alternatives--because it seems both most plausible and least interesting--is that the correlation results from parental response bias. Parents tend to overestimate what their children can do. This finding emerges in Hunt and Paraskevopoulos, in my own research, and in several other studies as well. In itself, the finding is clearly interesting, for it tells us something more about parental beliefs and accuracy than the very general statement with which I began. But the overestimation bias also provides a possible basis for parent-child correlations: If most parents give optimistic appraisals of what their children can do, then parents whose children happen to

do well will be scored as more accurate, and some relation between accuracy and developmental level is assured.

The general goal of the studies that I will be reporting was to provide some clarification of both the nature and the effects of parental accuracy. The first study focused, as has most such research, on parents' beliefs about cognitive abilities. It went beyond most such studies, however, in several ways. Most previous research has looked at only one age level of child; we included both second- and fifth-grade children. Most previous research has examined mothers only; we included mothers and fathers. Finally, most previous research has focused on one particular type of ability, but we were able to include five different cognitive tasks to which each child responded. The tasks (all of which were adjusted across age) included a set of grade-appropriate math problems, some vocabulary items from the Peabody Picture Vocabulary Test, a test of short-term memory, a geometric reproduction task adapted from the Kaufman Assessment Battery for Children, and some matrices problems taken from the Test of Nonverbal Intelligence. With this range of tasks, we were able to see whether parents' accuracy varied as a function of the type of ability in question. And we were able to see whether parents were consistent in their ability--or inability--to judge their children.

The main job for the child participants in the research was to respond to the tasks just described. The child's parents were interviewed, separately, at the same time that the child was being tested. During the parent session, we first carefully

demonstrated each of the tasks being administered to the child and then asked a series of questions about probable response. Among the judgments elicited were a prediction of the point total that the child would earn on the task, a certainty rating for this prediction, a prediction of the average point total that would be earned by the sample as a whole, and an estimate of the child's percentile ranking within the sample. As can be seen, we were interested in beliefs both about one's own child and about children in general, and about both absolute and relative standing.

It will come as no surprise to learn that our study also produced an in-between conclusion with respect to parental accuracy: not nonexistent, but also far from perfect. We examined accuracy in two ways. One was through correlations between parental predictions and child performance. The particular values varied some depending on the tasks, groups, and measures in question. In general, however, most of the correlations fell between .3 and .5, and approximately half were statistically significant. Thus parents did show some ability, on both the point totals and percentiles, to predict how their child would do. And given that our sample was a somewhat homogeneous one, the prediction is probably a bit more impressive than the size of the correlations suggests.

The second approach was to analyze discrepancy scores based on the absolute difference between the parent's prediction and the child's performance. Summing across groups and tasks, the average discrepancy was about 18%. This would mean, for example, an error

of about 4 1/2 points on a task with 25 possible points. So again, pretty good but not perfect.

The absolute discrepancies do not tell us the direction of the error when parents do err. Our results in this respect confirmed those of past research: Parents tend to overestimate their children's abilities. On the point total predictions 72% of the errors were overestimations; on the percentile predictions 84% of the errors were overestimations. Indeed, on the percentiles only 4% of the answers placed the child below the 50th percentile for the sample, even though, necessarily, half of the performances actually fell below this level.

Including several different tasks, and several predictions on each task, allowed us to look for possible consistency in parental accuracy. If parents are good at one type of judgment, are they also good at other types? We did find some consistency between point total accuracy and percentile accuracy for a given task--not surprising, perhaps, given the fact that the point total and percentile predictions tended to be correlated. Across tasks, however, there was essentially no consistency in the parents' accuracy. Thus knowing, for example, how good one's child was at math did not seem helpful when it came to predicting how the child would perform on memory or vocabulary.

As I noted earlier, we assessed the parents' certainty following each of their point total predictions. Parents proved moderately certain, averaging about 3.5 on the 5-point certainty scale. The certainty ratings, however, showed no relation at all to the accuracy of the parents' predictions. Thus, although

parents often think that they know when they know, we found little support for their intuitions.

So far I have not addressed two major issues of the study: the determinants of parental accuracy and the effects of parental accuracy. We found that a number of possible contributors had no effect on accuracy. There were no differences in accuracy between parents of boys and parents of girls. There were no differences in accuracy between parents of second graders and parents of fifth graders. And there were no differences in accuracy between mothers and fathers (and most of the mean differences favored the fathers!).

Two factors did prove to be important. One was task. Parents were least accurate in predicting--and most likely to overestimate--their children's memory. The other factor was target. We had expected, perhaps naively, that parents would be more accurate for their own child than they would be for children in general. Just the reverse proved true: Accuracy was consistently greater for the sample average than for one's own child. What seemed to happen was that parents first arrived at an estimate of how their own child would perform, then adjusted the estimate downward when thinking about the average child. But since the own-child judgment was usually an overestimation, the result of this downward adjustment was remarkable accuracy for the sample average.

Did accuracy relate to the level of the child's performance? We examined this issue through correlations between the parents' discrepancy scores and the children's performance. With this

approach, support for the hypothesized relation takes the form of a negative correlation: The smaller the discrepancy (and hence the greater the parent's accuracy), the higher the child's score. We did find such negative correlations--for both the point total and percentile predictions, at the level of both individual tasks and overall composite measures. Not all of the correlations were significant, and few were as large as Hunt and Paraskevopoulos's .8. In general, however, greater parental accuracy was associated with better child performance. We included a variety of other measures and analyses, the purpose of which was to disentangle various explanations for why such correlations might come about--both the two explanations that I have discussed and other possible bases. I would like to be able to tell you that although I do not have time to describe these analyses, they did lead to a clear conclusion with respect to the basis for the correlations. This, however, is only partly true: I do not have time to describe the analyses, but it seems fair to say that they did not clearly resolve the issue. I will consequently return to the question of why parents and children correlate after describing the second study.

The second study examined parents' knowledge of their children's preferences. We had two general reasons for an interest in preferences. One was simply that preferences are an interesting and important target for parents' attempts to understand their children. Any parent has some conception of what his or her child likes and dislikes across a variety of content areas, and the accuracy of these conceptions seems likely to

contribute to both the success of the parent's childrearing efforts and the general quality of the parent-child relationship. To date, however, almost nothing is known about what parents know about their children's preferences.

The second reason for interest lay in the relevance of preferences to the issue of relations between parental accuracy and child performance. An especially attractive feature of preferences in this regard is the absence of a positive response bias. When cognitive abilities are the target there is a clear "should" to the ordering of the scores: High scores are better than low. And parents, as I have said, tend to predict high scores for their children, a tendency that assures some relation between the child's performance and the parent's accuracy. With preferences, however, there is no such evaluative component; preferences simply reflect differences, not better or worse performance. Parents' tendency to overestimate is thus ruled out--and so is one basis for correlations between parental accuracy and performance.

The subjects for the second study were again second- and fifth-grade children, their mothers, and fathers. In this case, however, the child assessment was directed not to cognitive abilities but to likes and dislikes of various sorts. We asked, for example, about TV shows and movies, about things to eat and things to drink, about indoor and outdoor activities, about school subjects, and about friends. We asked in most cases for both a favorite and next favorite choice, and in some cases for a least favorite as well. Some of the questions were open-ended and

others were closed choice, requiring the child to rank various alternatives. All of the questions presented to the child were also shown to the parents, who again were asked to predict how their child would respond and how children in general would respond.

Do parents know their children's preferences? A prior question is whether children know their own preferences. As a test of reliability, all children responded to the preferences questions twice, with the two tests separated by about 2 weeks. Reliability varied some across different questions and was generally greater for fifth graders than for second graders; in no case, however, was the reliability very impressive. The system that we used to score parental accuracy took into account both of the child's sessions in such a way that no parent was automatically penalized by his or her child's low reliabilty. Nevertheless, it is clear that preferences constitute a kind of moving target for parents' predictions, and this fact should be kept in mind when evaluating parental accuracy.

Accuracy was in fact not very great. The simplest way in which we scored accuracy was to calculate the proportion of the parents' choices that matched one of their child's choices. Summing across the 27 open-choice questions, this proportion was 31%. As in the first study, there were no differences in accuracy between parents of boys and parents of girls. There was, however, an effect of the child's grade: Parents of fifth graders were more accurate than parents of second graders. There was also an effect of the parent's sex: Mothers were more accurate than

fathers. I should add, however, that these differences, although significant, were not very large.

We again were interested in correlations between the parent's accuracy and the child's cognitive performance. We had several measures of the latter: Peabody IQ scores, school grades, California Achievement Test Scores. The correlations varied some depending on the particular groups and measures being examined. In general, however, the pattern was one of consistently positive, moderately sized, usually significant values. Thus we did find a relation between accuracy and developmental level--and did so even in the absence of a positive response bias. More accurate parents had brighter children.

In the time remaining, I will concentrate on the question of why parents' accuracy relates to their child's cognitive level. Our studies confirm that this relation exists; they do so, moreover, across a wider range of measures of both accuracy and developmental level than had been examined before. I would like to broaden my earlier discussion to suggest that there are four possible explanations for such correlations, and that each of them probably plays a role. One, certainly, is overestimation bias--the built-in relation between accuracy and developmental level when most parents give positive estimates of their children's performance. Even in studies of cognitive abilities, however, I am not convinced that this effect is all statistical artifact, and our preferences study demonstrates in any case that it cannot be all that is occurring. A second possibility is that the direction of effect for the correlation is the reverse of that indicated in

the match hypothesis--that is, from child to parent rather than parent to child. Perhaps high-ability children are easier to judge than lower-ability children. They may, for example, be more verbal, and thus give more clues to both their abilities and their preferences than do most children. A third possibility is that the correlation reflects general similarity in intelligence between parent and child. Parents and children, after all, are similar in intelligence, and we would expect some correlation between them in any study in which both are performing cognitive tasks. And judging one's child is certainly a cognitive task.

This brings us to the final possibility, which is the match hypothesis. At some level, the ideas behind the hypothesis are presumably not in dispute: that parents' beliefs about their child affect their behavior toward the child, and that the parent's behavior affects the child's development. The challenge is to fill in the specifics. We do now have studies, some by members of this symposium, that are beginning to show how particular beliefs affect particular behaviors, and how both beliefs and behaviors relate to particular outcomes in the child. The studies that I have reported show one kind of belief-outcome link. As I have just stressed, it is a link that probably has multiple bases. But the findings are at least compatible with the match hypothesis--and with the even more general idea that knowing one's child is a good thing.